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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,099

09/29/2003

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(2003P004062)

2423

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7590

07/20/2005

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EXAMINER

SAETHER, FLEMMING

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,099

Applicant(s)

NAGAWA ET AL.

Examiner

Flemming Saether

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-16, 19-24 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-16, 19-24 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the female thread being deviated at the second axial part must be shown or the feature canceled from the claim. Indeed, as currently shown the female thread is not deformed from a standard shape thus; the nut would not provide a loosening-proof function. Also, the outer periphery of the second part being circular with the two pair of axial slits (claim 12) must be shown or that feature canceled from the claim. No new matter should be entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-6, 8, 10, 11, 21-24 and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Granberry (US 2,776,692). Granberry discloses loosening-proof nut having a female thread comprising an upper second part (4, 5) and a lower first part (1) separated by a two slits (2, 3), penetrating the thread of the nut, located entirely at the same axial position and which are symmetrical about the nut's axis. The slits defining push parts (4, 5) which are bent downward resulting in plastic deformation by an axially directed force (note arrows in Fig. 4) which in turn deviates the female thread (see Fig. 4 and 5) and deforms the slits to be angled wherein the gap is greater at the

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inner part of the slit than at the outer part (see Fig. 4). The angle and the ratio of the slit and nut are within the claimed ranges. The upper second part is formed as a continuous solid circular shape which has a maximum diameter not greater than a maximum diameter of the first lower part (see Fig. 1) which would enable a wrench to be received in the lower part.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 9, 12, 14-16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Granberry in view of Hanfland (GB 1,045,163, "the '163 patent"). Granberry discloses a polygon shaped nut having features as described above but, does not disclose the slits including two pairs of slits. Hanfland discloses a similar type nut and in the embodiment of Figs. 9 and 10 discloses the slits to be formed as a two pairs of slits (33, 35 and 34, 36). At the time the invention was made, it would have been obvious for one of ordinary skill in the art to form the slits of Granberry as two pairs of slits as disclosed in Hanfland because Hanfland teaches the equivalence of a single pair of slits (Figs. 1-4) and two pairs of slits (Figs. 9 and 10).

Claims 7, 9, 13, 14, 15, 19 and 20 are rejected (some alternatively) under 35 U.S.C. 103(a) as being unpatentable over Olson (US 2,142,820) in view of Hanfland (GB 1,045,163, "the '163 patent"). Olson discloses polygonal nut (10) having a female thread comprising a second part (at 18) and a first part (at 20) separated by a two slits (16), penetrating the thread of the nut, located entirely at the same axial position and which are symmetrical about the nut's axis. The slits defining push parts (18) which are bent downward resulting in plastic deformation by a pressure which in turn deviates the female thread (see Fig. 4) and deforms the slits to be angled wherein the gap is greater at the inner part of the slit than at the outer part (see Figs. 1, 2 and 4). Olson does not disclose the slits including two pairs of slits. Hanfland discloses a similar type nut and in the embodiment of Figs. 9 and 10 discloses the slits to be formed as a two pairs of slits (33, 35 and 34, 36). At the time the invention was made, it would have been obvious for one of ordinary skill in the art to form the slits of Olson as two pairs of slits as disclosed in Hanfland because Hanfland teaches the equivalence of a single pair of slits (Figs. 1-4) and two pairs of slits (Figs. 9 and 10).

Response to Remarks:

Applicant's request to be contacted prior to this action has been considered but since this action is based on newly found references the examiner is of the opinion that any discussion would be premature without giving the applicant an opportunity to consider the new references as applied to the claims. In turn, the applicant is invited to contact the undersigned examiner at his convenience after considering the new

references. It should be noted that the application has been docketed to a new examiner.

Applicant's subsequent remarks arguing the rejections have been considered but are moot in view of the new grounds of rejection as set forth above. Applicant's arguments are largely based on the claims being amended to require the slits, including the ends of the slits, to be positioned at the same axial location along the nut and since a further search revealed that feature in at least the references to Granberry and Olson the remarks are answered in the new rejections applying both Granberry and Olson.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Flemming Saether whose telephone number is 571-272-7071. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Flemming Saether
Primary Examiner
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